

**Work Order ID 156371**

Friday, January 27, 2017 1:41:35 PM

**\*156371\***

Page 1

Item ID: D4910-1

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Chaffing Shield

Start Date: 1/30/2017 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 2/1/2017 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals: Process Plan:

DAS  
21  
9-89

Date: FEB 02 2017

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

Draw Nbr

Revision Nbr

D4910

A

100

0.01

**\*100\***

SHEAR

Waterjet

Memo

0.07

FLOW CNC Waterjet

1-Cut as per Dwg

Dwg Rev: AProg Rev: A

2-Deburr if necessary

(10)

02/17/02/16

110

QC2- Inspect parts off machine FAI/FAIB

0.00

**\*110\***

QC

Memo

0.01

Quality Control

(10)

02/17/02/16

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------|------------------------------------------|------------------------------------|-------------------------------------|------------------------------------|--------------------------------------|---------------------------------------|------------------------------------------------|--------------------------------------------|-----------------------------------|----------------------------------------|---------------------------------------|----------------------------------------------|-------------------------------------------------|------------------------------------|------------------------------------------|-----------------------------------|---------------------------------------------|-------------------------------------------|-----------------------------------|-------------------------------------------|----------------------------------|-------------------------------------|------------------------------|----------------------------------------------|---------------------------------------------|-------------------------------------|----------------------------------------------|----------------------------------------|-------------------------------------------|------------------------------------------------|--|----------------------------------------|-----------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------------------------------------|-------------------------------------------|-------------------------------------------|---------------------------------|----------------------------------------|---------------------------------------------|------------------------------------|--------------------------------|-----------------------------------------------|-----------------------------------------------|-------------------------------|-----------------------------------------|------------------------------------------------------------|---------------------------------------------|--------------------------------------------|----------------------------------------|------------------------------------------|-------------------------------------|--------------------------------------|----------------------------------|----------------------------------|----------------------------------------|-------------------------------------|---------------------------------|----------------------------------------------------------|---------------------------------------|----------------------------------|--------------------------------------|------------------------------------------------|-------------------------------------------|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube <input type="checkbox"/></td> <td style="border: none;">Cross tube <input type="checkbox"/></td> <td style="border: none;">Water Jet <input type="checkbox"/></td> <td style="border: none;">Engineering <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Machining <input type="checkbox"/></td> <td style="border: none;">Small Fab <input type="checkbox"/></td> <td style="border: none;">Prod. Eng. Coord. <input type="checkbox"/></td> <td style="border: none;">Quality <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Thermoforming <input type="checkbox"/></td> <td style="border: none;">Finishing <input type="checkbox"/></td> <td style="border: none;">Rec/Store/Packaging <input type="checkbox"/></td> <td style="border: none;">Other <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Large Fab <input type="checkbox"/></td> <td style="border: none;">Composite <input type="checkbox"/></td> <td style="border: none;">Supplier <input type="checkbox"/></td> <td></td> </tr> </table> |                                              |                                             |                                          | Skid-tube <input type="checkbox"/> | Cross tube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/>    | Small Fab <input type="checkbox"/>             | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/>  | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/>    | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>                  | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/>       | Supplier <input type="checkbox"/> |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Skid-tube <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Cross tube <input type="checkbox"/>                                                                                                                                                | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Engineering <input type="checkbox"/>         |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Machining <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Quality <input type="checkbox"/>             |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Thermoforming <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Other <input type="checkbox"/>               |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Large Fab <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Step #:                                                                                                                                                                            | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                              | MRB (QSI042) Approval                       |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Disposition                                  |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Completed By                                 |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Lead hand / Supervisor Approval Verification |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | QC / QA Coordinator Approval                 |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| <b>Root Cause</b><br><table style="width: 100%; border: none;"> <tr> <td style="border: none;">Environment <input type="checkbox"/></td> <td style="border: none;">No Re-verification <input type="checkbox"/></td> <td style="border: none;">Pressure/Forced <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Design <input type="checkbox"/></td> <td style="border: none;">Operator <input type="checkbox"/></td> <td style="border: none;">Bending <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Doc/Data <input type="checkbox"/></td> <td style="border: none;">Offset/Setup <input type="checkbox"/></td> <td style="border: none;">Centre Not Concentric <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Equip/Tooling <input type="checkbox"/></td> <td style="border: none;">Supplier <input type="checkbox"/></td> <td style="border: none;">Cracks <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Handling/Pre <input type="checkbox"/></td> <td style="border: none;">Training <input type="checkbox"/></td> <td style="border: none;">Crimp/Kink/Ripple/Wave <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Material <input type="checkbox"/></td> <td style="border: none;">Use for Testing <input type="checkbox"/></td> <td style="border: none;">Cuffs <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Internal Transport <input type="checkbox"/></td> <td style="border: none;">Poor Information <input type="checkbox"/></td> <td style="border: none;">Crushing <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Tribal Knowledge <input type="checkbox"/></td> <td style="border: none;">Rushing <input type="checkbox"/></td> <td style="border: none;">Heat Treat <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">LOA <input type="checkbox"/></td> <td style="border: none;">Product Improvement <input type="checkbox"/></td> <td style="border: none;">Wave/Twist in Tube <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Substation <input type="checkbox"/></td> <td style="border: none;">Process Improvement <input type="checkbox"/></td> <td style="border: none;">Marks/Chatter <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Past Expiry Date <input type="checkbox"/></td> <td style="border: none;">Manufacturing Process <input type="checkbox"/></td> <td></td> </tr> <tr> <td style="border: none;">Misidentified <input type="checkbox"/></td> <td style="border: none;">Past Due <input type="checkbox"/></td> <td></td> </tr> </table> |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Environment <input type="checkbox"/>         | No Re-verification <input type="checkbox"/> | Pressure/Forced <input type="checkbox"/> | Design <input type="checkbox"/>    | Operator <input type="checkbox"/>   | Bending <input type="checkbox"/>   | Doc/Data <input type="checkbox"/>    | Offset/Setup <input type="checkbox"/> | Centre Not Concentric <input type="checkbox"/> | Equip/Tooling <input type="checkbox"/>     | Supplier <input type="checkbox"/> | Cracks <input type="checkbox"/>        | Handling/Pre <input type="checkbox"/> | Training <input type="checkbox"/>            | Crimp/Kink/Ripple/Wave <input type="checkbox"/> | Material <input type="checkbox"/>  | Use for Testing <input type="checkbox"/> | Cuffs <input type="checkbox"/>    | Internal Transport <input type="checkbox"/> | Poor Information <input type="checkbox"/> | Crushing <input type="checkbox"/> | Tribal Knowledge <input type="checkbox"/> | Rushing <input type="checkbox"/> | Heat Treat <input type="checkbox"/> | LOA <input type="checkbox"/> | Product Improvement <input type="checkbox"/> | Wave/Twist in Tube <input type="checkbox"/> | Substation <input type="checkbox"/> | Process Improvement <input type="checkbox"/> | Marks/Chatter <input type="checkbox"/> | Past Expiry Date <input type="checkbox"/> | Manufacturing Process <input type="checkbox"/> |  | Misidentified <input type="checkbox"/> | Past Due <input type="checkbox"/> |  | <b>FAULT CATEGORY</b><br><table style="width: 100%; border: none;"> <tr> <td style="border: none;">Temperature/Cure <input type="checkbox"/></td> <td style="border: none;">Power Loss/Surge <input type="checkbox"/></td> <td style="border: none;">Positioned Wrong <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Set-up <input type="checkbox"/></td> <td style="border: none;">Folio/Program <input type="checkbox"/></td> <td style="border: none;">Outside Dimensions <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">BOM/Route <input type="checkbox"/></td> <td style="border: none;">Grain <input type="checkbox"/></td> <td style="border: none;">Over/Under tolerance <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Broken/Damage/Defect <input type="checkbox"/></td> <td style="border: none;">Weld <input type="checkbox"/></td> <td style="border: none;">Part Incorrect <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Inspection Incomplete/Unqualified <input type="checkbox"/></td> <td style="border: none;">Wrong Stock Pulled <input type="checkbox"/></td> <td style="border: none;">Part Lost/Missing <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Contamination <input type="checkbox"/></td> <td style="border: none;">Out of Sequence <input type="checkbox"/></td> <td style="border: none;">Part Moved <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Countersink <input type="checkbox"/></td> <td style="border: none;">Off-set <input type="checkbox"/></td> <td style="border: none;">Drawing <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Cut Too Short <input type="checkbox"/></td> <td style="border: none;">Mislabeled <input type="checkbox"/></td> <td style="border: none;">Finish <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Instructions Incomplete/Unclear <input type="checkbox"/></td> <td style="border: none;">Fit/Function <input type="checkbox"/></td> <td style="border: none;">Misread <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Drill Holes <input type="checkbox"/></td> <td style="border: none;">Misaligned/off center <input type="checkbox"/></td> <td style="border: none;">Turning Sequence <input type="checkbox"/></td> </tr> </table> |  |  | Temperature/Cure <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/> | Positioned Wrong <input type="checkbox"/> | Set-up <input type="checkbox"/> | Folio/Program <input type="checkbox"/> | Outside Dimensions <input type="checkbox"/> | BOM/Route <input type="checkbox"/> | Grain <input type="checkbox"/> | Over/Under tolerance <input type="checkbox"/> | Broken/Damage/Defect <input type="checkbox"/> | Weld <input type="checkbox"/> | Part Incorrect <input type="checkbox"/> | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/> | Part Lost/Missing <input type="checkbox"/> | Contamination <input type="checkbox"/> | Out of Sequence <input type="checkbox"/> | Part Moved <input type="checkbox"/> | Countersink <input type="checkbox"/> | Off-set <input type="checkbox"/> | Drawing <input type="checkbox"/> | Cut Too Short <input type="checkbox"/> | Mislabeled <input type="checkbox"/> | Finish <input type="checkbox"/> | Instructions Incomplete/Unclear <input type="checkbox"/> | Fit/Function <input type="checkbox"/> | Misread <input type="checkbox"/> | Drill Holes <input type="checkbox"/> | Misaligned/off center <input type="checkbox"/> | Turning Sequence <input type="checkbox"/> |
| Environment <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No Re-verification <input type="checkbox"/>                                                                                                                                        | Pressure/Forced <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Design <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Operator <input type="checkbox"/>                                                                                                                                                  | Bending <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Doc/Data <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Offset/Setup <input type="checkbox"/>                                                                                                                                              | Centre Not Concentric <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Equip/Tooling <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Supplier <input type="checkbox"/>                                                                                                                                                  | Cracks <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Handling/Pre <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Training <input type="checkbox"/>                                                                                                                                                  | Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Material <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Use for Testing <input type="checkbox"/>                                                                                                                                           | Cuffs <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Internal Transport <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Poor Information <input type="checkbox"/>                                                                                                                                          | Crushing <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Tribal Knowledge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Rushing <input type="checkbox"/>                                                                                                                                                   | Heat Treat <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| LOA <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Product Improvement <input type="checkbox"/>                                                                                                                                       | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Substation <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Process Improvement <input type="checkbox"/>                                                                                                                                       | Marks/Chatter <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Past Expiry Date <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Manufacturing Process <input type="checkbox"/>                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Misidentified <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Past Due <input type="checkbox"/>                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Temperature/Cure <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Power Loss/Surge <input type="checkbox"/>                                                                                                                                          | Positioned Wrong <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Set-up <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Folio/Program <input type="checkbox"/>                                                                                                                                             | Outside Dimensions <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| BOM/Route <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Grain <input type="checkbox"/>                                                                                                                                                     | Over/Under tolerance <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Broken/Damage/Defect <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Weld <input type="checkbox"/>                                                                                                                                                      | Part Incorrect <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Inspection Incomplete/Unqualified <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Wrong Stock Pulled <input type="checkbox"/>                                                                                                                                        | Part Lost/Missing <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Contamination <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Out of Sequence <input type="checkbox"/>                                                                                                                                           | Part Moved <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Countersink <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Off-set <input type="checkbox"/>                                                                                                                                                   | Drawing <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Cut Too Short <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Mislabeled <input type="checkbox"/>                                                                                                                                                | Finish <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Instructions Incomplete/Unclear <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Fit/Function <input type="checkbox"/>                                                                                                                                              | Misread <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| Drill Holes <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Misaligned/off center <input type="checkbox"/>                                                                                                                                     | Turning Sequence <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |
| OTHER : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                              |                                             |                                          |                                    |                                     |                                    |                                      |                                       |                                                |                                            |                                   |                                        |                                       |                                              |                                                 |                                    |                                          |                                   |                                             |                                           |                                   |                                           |                                  |                                     |                              |                                              |                                             |                                     |                                              |                                        |                                           |                                                |  |                                        |                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                           |                                           |                                           |                                 |                                        |                                             |                                    |                                |                                               |                                               |                               |                                         |                                                            |                                             |                                            |                                        |                                          |                                     |                                      |                                  |                                  |                                        |                                     |                                 |                                                          |                                       |                                  |                                      |                                                |                                           |

**Work Order ID 156371**

Friday, January 27, 2017 1:41:35 PM

**\*156371\***

Page 2

Item ID: D4910-1

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Chaffing Shield

Start Date: 1/30/2017 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 2/1/2017 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

120

QC8- Inspect parts - second check

0.00

**\*120\***

QC

Memo

0.03

Quality Control

DAS  
38  
9-89  
FEB 16 2017

130

Small Fab

0.00

**\*130\***

Small Fab

Memo

0.08

Small Fab

1- Roll as per Dwg

2- Apply a thin coat of proscal as per dwg and let cure.

136665  
exp 8/17DAS  
41  
9-89  
17-2-17

140

QC5- Inspect part completeness to step on W/O

0.00

**\*140\***

QC

Memo

0.03

Quality Control

DAS  
38  
9-89  
FEB 21 2017

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                                                                                                                   |                                              |  |
|--------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                                | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                                            | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |                                               |  |                                                                                                                   |                                              |  |
| Date :                                                       |                                                | Step #:                                                                                                                                                                            |                                                            | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  | <b>MRB (QSI042) Approval</b><br><br><div style="border: 1px solid black; height: 150px; margin-top: 10px;"></div> |                                              |  |
| Description Work Order Deviation                             |                                                |                                                                                                                                                                                    |                                                            | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |  |                                                                                                                   |                                              |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                                                                                                                   |                                              |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                                                                                                                   | Completed By                                 |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                                                                                                                   | Lead hand / Supervisor Approval Verification |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                                                                                                                   | QC / QA Coordinator Approval                 |  |
| Root Cause                                                   |                                                | FAULT CATEGORY                                                                                                                                                                     |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                                                                                                                   |                                              |  |
| Environment <input type="checkbox"/>                         | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Positioned Wrong <input type="checkbox"/>     |  |                                                                                                                   |                                              |  |
| Design <input type="checkbox"/>                              | Operator <input type="checkbox"/>              | Bending <input type="checkbox"/>                                                                                                                                                   | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Outside Dimensions <input type="checkbox"/>   |  |                                                                                                                   |                                              |  |
| Doc/Data <input type="checkbox"/>                            | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>                                                                                                                                     | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Over/Under tolerance <input type="checkbox"/> |  |                                                                                                                   |                                              |  |
| Equip/Tooling <input type="checkbox"/>                       | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                                                                                                                                                    | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Part Incorrect <input type="checkbox"/>       |  |                                                                                                                   |                                              |  |
| Handling/Pre <input type="checkbox"/>                        | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                    | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Part Lost/Missing <input type="checkbox"/>    |  |                                                                                                                   |                                              |  |
| Material <input type="checkbox"/>                            | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                                                                                                                                                     | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Part Moved <input type="checkbox"/>           |  |                                                                                                                   |                                              |  |
| Internal Transport <input type="checkbox"/>                  | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>                                                                                                                                                  | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Drawing <input type="checkbox"/>              |  |                                                                                                                   |                                              |  |
| Tribal Knowledge <input type="checkbox"/>                    | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>                                                                                                                                                | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Finish <input type="checkbox"/>               |  |                                                                                                                   |                                              |  |
| LOA <input type="checkbox"/>                                 | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                        | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Misread <input type="checkbox"/>              |  |                                                                                                                   |                                              |  |
| Substation <input type="checkbox"/>                          | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>                                                                                                                                             | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Turning Sequence <input type="checkbox"/>     |  |                                                                                                                   |                                              |  |
| Past Expiry Date <input type="checkbox"/>                    | Manufacturing Process <input type="checkbox"/> | OTHER : _____                                                                                                                                                                      |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                                                                                                                   |                                              |  |
| Misidentified <input type="checkbox"/>                       | Past Due <input type="checkbox"/>              |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                                                                                                                   |                                              |  |



**Work Order ID 156371**

Friday, January 27, 2017 1:41:35 PM

**\*156371\***

Page 3

Item ID: D4910-1

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Chaffing Shield

Start Date: 1/30/2017 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 2/1/2017 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150

Identify as per dwg &amp; Stock Location: \_\_\_\_\_

0.00

**\*150\***

Packaging

Packaging

Memo

LOCATION : LG053

0.01

10

DAS  
6  
9-89

FEB 21 2017

160

QC21- Final Inspection - Work Order Release

0.00

**\*160\***

QC

Quality Control

Memo

0.13

17/2/22

mf

17-2-21

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Step #:                                                                                                                                                                            | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | MRB (QSI042) Approval |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Completed By                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Lead hand / Supervisor Approval Verification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | QC / QA Coordinator Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |  |
| <b>Root Cause</b><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;">           Environment <input type="checkbox"/><br/>           Design <input type="checkbox"/><br/>           Doc/Data <input type="checkbox"/><br/>           Equip/Tooling <input type="checkbox"/><br/>           Handling/Pre <input type="checkbox"/><br/>           Material <input type="checkbox"/><br/>           Internal Transport <input type="checkbox"/><br/>           Tribal Knowledge <input type="checkbox"/><br/>           LOA <input type="checkbox"/><br/>           Substation <input type="checkbox"/><br/>           Past Expiry Date <input type="checkbox"/><br/>           Misidentified <input type="checkbox"/> </div> <div style="width: 33%;">           No Re-verification <input type="checkbox"/><br/>           Operator <input type="checkbox"/><br/>           Offset/Setup <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Training <input type="checkbox"/><br/>           Use for Testing <input type="checkbox"/><br/>           Poor Information <input type="checkbox"/><br/>           Rushing <input type="checkbox"/><br/>           Product Improvement <input type="checkbox"/><br/>           Process Improvement <input type="checkbox"/><br/>           Manufacturing Process <input type="checkbox"/><br/>           Past Due <input type="checkbox"/> </div> <div style="width: 33%;">           Pressure/Forced <input type="checkbox"/><br/>           Bending <input type="checkbox"/><br/>           Centre Not Concentric <input type="checkbox"/><br/>           Cracks <input type="checkbox"/><br/>           Crimp/Kink/Ripple/Wave <input type="checkbox"/><br/>           Cuffs <input type="checkbox"/><br/>           Crushing <input type="checkbox"/><br/>           Heat Treat <input type="checkbox"/><br/>           Wave/Twist in Tube <input type="checkbox"/><br/>           Marks/Chatter <input type="checkbox"/> </div> </div> |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>FAULT CATEGORY</b><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;">           Temperature/Cure <input type="checkbox"/><br/>           Set-up <input type="checkbox"/><br/>           BOM/Route <input type="checkbox"/><br/>           Broken/Damage/Defect <input type="checkbox"/><br/>           Inspection Incomplete/Unqualified <input type="checkbox"/><br/>           Contamination <input type="checkbox"/><br/>           Countersink <input type="checkbox"/><br/>           Cut Too Short <input type="checkbox"/><br/>           Instructions Incomplete/Unclear <input type="checkbox"/><br/>           Drill Holes <input type="checkbox"/> </div> <div style="width: 33%;">           Power Loss/Surge <input type="checkbox"/><br/>           Folio/Program <input type="checkbox"/><br/>           Grain <input type="checkbox"/><br/>           Weld <input type="checkbox"/><br/>           Wrong Stock Pulled <input type="checkbox"/><br/>           Out of Sequence <input type="checkbox"/><br/>           Off-set <input type="checkbox"/><br/>           Mislabeled <input type="checkbox"/><br/>           Fit/Function <input type="checkbox"/><br/>           Misaligned/off center <input type="checkbox"/> </div> <div style="width: 33%;">           Positioned Wrong <input type="checkbox"/><br/>           Outside Dimensions <input type="checkbox"/><br/>           Over/Under tolerance <input type="checkbox"/><br/>           Part Incorrect <input type="checkbox"/><br/>           Part Lost/Missing <input type="checkbox"/><br/>           Part Moved <input type="checkbox"/><br/>           Drawing <input type="checkbox"/><br/>           Finish <input type="checkbox"/><br/>           Misread <input type="checkbox"/><br/>           Turning Sequence <input type="checkbox"/> </div> </div> |                       |  |
| OTHER :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |  |

# Picklist Print

Friday, January 27, 2017 1:41:40 PM

Page 1

Work Order ID: 156371

\*156371\*

Parent Item: D4910-1

\*D4910-1\*

Parent Item Name: Chaffing Shield

Start Date: 1/30/2017

Required Date: 2/1/2017

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 13.08.21 NEW ISSUE DD VERF:JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| M304S25GA                       | 24 GA                  | Purchased     | No          |                     |                  | 100             | sf                 | 0.0000         | 0.35        | 2.947369     |               |                |        |

\*M304S25GA\*

304/316 .020" Sheet 304 sheet 25 GA

\*\*

01/17/02/16

135780

3.9

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

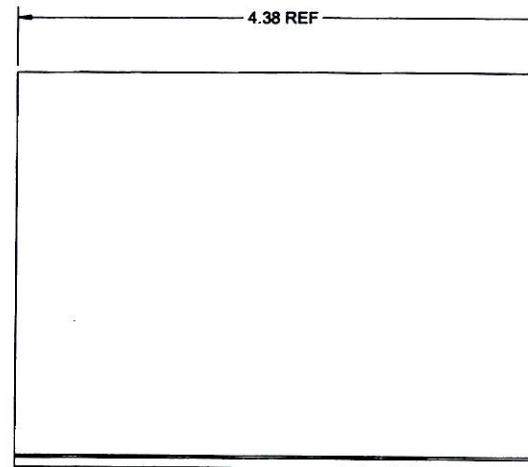
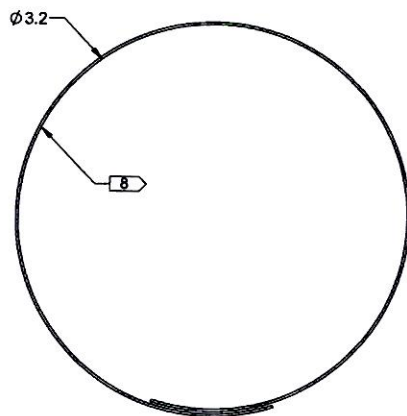
QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                              |  |
|--------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|-----------------------|----------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                                | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                                            | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |                                               |  |                       |                                              |  |
| Date :                                                       |                                                | Step #:                                                                                                                                                                            |                                                            | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  | MRB (QSI042) Approval |                                              |  |
| Description Work Order Deviation                             |                                                |                                                                                                                                                                                    |                                                            | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |  |                       | Completed By                                 |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       | Lead hand / Supervisor Approval Verification |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       | QC / QA Coordinator Approval                 |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                              |  |
| Root Cause                                                   |                                                | FAULT CATEGORY                                                                                                                                                                     |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                              |  |
| Environment <input type="checkbox"/>                         | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Positioned Wrong <input type="checkbox"/>     |  |                       |                                              |  |
| Design <input type="checkbox"/>                              | Operator <input type="checkbox"/>              | Bending <input type="checkbox"/>                                                                                                                                                   | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Outside Dimensions <input type="checkbox"/>   |  |                       |                                              |  |
| Doc/Data <input type="checkbox"/>                            | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>                                                                                                                                     | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Over/Under tolerance <input type="checkbox"/> |  |                       |                                              |  |
| Equip/Tooling <input type="checkbox"/>                       | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                                                                                                                                                    | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Part Incorrect <input type="checkbox"/>       |  |                       |                                              |  |
| Handling/Pre <input type="checkbox"/>                        | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                    | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Part Lost/Missing <input type="checkbox"/>    |  |                       |                                              |  |
| Material <input type="checkbox"/>                            | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                                                                                                                                                     | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Part Moved <input type="checkbox"/>           |  |                       |                                              |  |
| Internal Transport <input type="checkbox"/>                  | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>                                                                                                                                                  | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Drawing <input type="checkbox"/>              |  |                       |                                              |  |
| Tribal Knowledge <input type="checkbox"/>                    | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>                                                                                                                                                | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Finish <input type="checkbox"/>               |  |                       |                                              |  |
| LOA <input type="checkbox"/>                                 | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                        | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Misread <input type="checkbox"/>              |  |                       |                                              |  |
| Substation <input type="checkbox"/>                          | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>                                                                                                                                             | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Turning Sequence <input type="checkbox"/>     |  |                       |                                              |  |
| Past Expiry Date <input type="checkbox"/>                    | Manufacturing Process <input type="checkbox"/> | OTHER : _____                                                                                                                                                                      |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                              |  |
| Misidentified <input type="checkbox"/>                       | Past Due <input type="checkbox"/>              |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                              |  |







# **D4910-1 CHAFING SHIELD**

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 156371MWS  
170202

**RELEASED**  
2013-08-14  
12P

- NOTES:
- 1) MATERIAL: MAKE FROM D4910-1F
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: N/A
  - 6) IDENTIFICATION: NONE
  - 7) WEIGHT: 0.28 lbs
  - 8) APPLY A THIN COAT OF PROSEAL 890 ON INSIDE CONCAVE SURFACE OF D4910-1 CHAFING SHIELD AND LET CURE PER MANUFACTURER'S INSTRUCTIONS.

| A          |          | NEW ISSUE                                                                                                                                                                                                                                                                                                                                                                                                      |  | CP | 13.04.24 |
|------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----|----------|
| REV.       |          | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                    |  | BY | DATE     |
| DESIGN     |          | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA<br>DRAWING NO. <b>D4910</b><br>TITLE <b>CHAFING SHIELD</b><br>COPYRIGHT © 2013 BY DART AEROSPACE LTD<br><small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small> |  |    |          |
| DRAWN      |          |                                                                                                                                                                                                                                                                                                                                                                                                                |  |    |          |
| CHECKED    |          |                                                                                                                                                                                                                                                                                                                                                                                                                |  |    |          |
| MFG. APPR. |          |                                                                                                                                                                                                                                                                                                                                                                                                                |  |    |          |
| APPROVED   |          |                                                                                                                                                                                                                                                                                                                                                                                                                |  |    |          |
| DE APPR.   |          |                                                                                                                                                                                                                                                                                                                                                                                                                |  |    |          |
| DATE       | 13.04.24 |                                                                                                                                                                                                                                                                                                                                                                                                                |  |    |          |

REV. A  
SHEET 1 OF 2  
SCALE  
NTS

8 7 6 5 4 3 2 1

D

C

B

A

4.38

11.50

R0.25 TYP

**D4910-1F FLAT PATTERN**

**RELEASED**  
2013-08-14

**NOTES:**

- 1) MATERIAL: AISI 304/316 SS SHEET, 0.020 THICK, ANNEALED  
PER MIL-S-5059, AMS 5513, AMS 5524, ASTM A240, OR ASME SA240  
REF DART SPEC M304S25GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.28 lbs

|            |                 |                                                                                                                                                                                                                                                                                                 |              |
|------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     |                 | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                       |              |
| DRAWN      |                 | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                                     |              |
| CHECKED    |                 | DRAWING NO.                                                                                                                                                                                                                                                                                     | REV. A       |
| MFG. APPR. |                 | <b>D4910</b>                                                                                                                                                                                                                                                                                    | SHEET 2 OF 2 |
| APPROVED   |                 | TITLE                                                                                                                                                                                                                                                                                           | SCALE        |
| DE APPR.   |                 | <b>CHAFING SHIELD</b>                                                                                                                                                                                                                                                                           | NTS          |
| DATE       | <b>13.04.24</b> | <small>COPYRIGHT © 2013 BY DART AEROSPACE LTD<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br/>NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT<br/>WRITTEN PERMISSION FROM DART AEROSPACE LTD</small> |              |

8 7 6 5 4 3 2 1